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DEVELOPMENT OF DESIGN AND CONSTRUCTION OF FISHING BOATS IN UGANDA

by

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Master Boat Builder

FISHING BOATS and canoes varied very little in Uganda from the middle of the 19th century until 1949, types in use being the Dug Out Canoe, up to 40 ft. in length with 4 ft. beam hollowed from trees, and "Sesse" canoes which were used on Lake Victoria; these had an obvious Arab influence. The length of the "Sesse" in recent years as from about 1912 is 28 ft., and it is used as an open fishing craft (1) (2) (4).

Both of the above craft have many disadvantages; the Dug Outs had a long life, but were unstable and dangerous in rough water, with a limited carrying capacity. The "Sesse" canoes were quite sea-worthy craft, but had a very short working life, mainly due to the poor timber used and the type of construction (3).

1949 saw the formation of the Fisheries Department, and the need for improved boats was soon obvious to this Department. The first move was to import a number of fishing boats from overseas, the size of these craft being restricted to 30 ft. in length, and all being powered by inboard engines. 1956 saw the beginning of the Boat-building Apprenticeship Scheme. This was started at the, then, Kabalega Schools, Masindi, under the direction of the Uganda Ministry of Education, but with close liaison with the Fisheries Department. The object of this course was to train carpentry students, with a good basic background in carpentry, in the art of boat-building. These apprentices served for a period of two years at this school, and it was shortly after the conception of this scheme that the Kabalega Canoe was designed and built *(see* Fig. 1). This boat was of double chine form with a carrying capacity of approximately 1½ tons, built of Mahogany *(Khaya* species) throughout, using longitudinal planking, designed for use with an outboard engine of 15 H.P., and giving a speed of approximately 7 knots. This hull was a direct development of the "Sesse" type canoe, the hull form being very similar, but with a greater beam. These boats proved very successful both in fishing and case of building. The cost of one of these hulls was Shs. 3,500, with a life expectancy of between five and six years. Later boats of this design were built of Muvule (Chlorophora excelsa), which increased the working life to between seven and eight years. The end of 1957 saw the first of the trained boat-building apprentices leave Kabalega Schools, and set up in business on their own, the most successful of these first groups being at Butiaba on the shores of Lake Albert.

A round bilge clinker built hull, 16 ft. in length, was then designed with the idea of improving the skill of the apprentices, and also to introduce a new type of hull form and construction. Until 1958, when the first of these boats was built, it was thought that no such form or construction had ever been built in Uganda before, using local labour. A number of these hulls were built and sold to fishermen, but it was found that they were not large enough for the average needs of the fishermen. This brought about the design and construction of a 24 ft. round bilge hull *(see* Fig. 2). This hull was, in fact, the second stage of the development of the "Sesse" canoe hull form—the lines of the Kabalega Canoe were taken as

a basis for this design, and the double chine form 'rounded off'. This hull has approximately the same carrying capacity, but it is not as fast. A greater number of these boats were built, and sold, as compared to the 16 ft. boat, and they are quite successful.

Fig. 3 shows the lines of a 21 ft. round bilge clinker hull. This, again, was designed with two main factors considered; firstly that this boat would fill a very useful purpose as a fish carrier on Lake Albert, and secondly the hull could easily be adapted to take an inboard engine. One such hull was adapted to take an inboard engine.

In 1966, a single chine hull was designed and built (*see* Fig. 4). This hull was a great deal cheaper than any of the designs so far produced, and building was of a very simple form. This was also to be powered with an outboard engine, and would, it was felt, suit the needs of most of the lakes of Uganda.

The main difficulty in wooden boat construction in Uganda is the supply of suitable boat-building timbers, rot being an important problem. Impregnated timber seems to be the only sensible way to extend the life of the boat, but experience of impregnated timbers used in Uganda is still very limited. Tests have been carried out by the Utilisation Section of the Ministry of Agriculture, Forestry and Co-operatives, Uganda, and a number of very interesting facts have been produced regarding timber impregnation. It would appear that there are a number of timbers available in Uganda that can be impregnated, which could be used for boat-building. One in particular is *Chrysophyllum* spp. (local name Mululu). There would appear to be a large amount of this timber available; sources of supply are widespread and it is one of the cheaper timbers. Its excellent bending properties, compressive strength and stiffness would suggest that it may prove to be a very good general boat-building timber. Good seasoning would be vital, as with other timbers, but it may prove better to use a cheaper timber which can be impregnated, rather than the traditional timbers such as Muvule and Mahogany, which are resistant to treatment.

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